

D.O.T. 66

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

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INTERDEPARTMENT CORRESPONDENCE

**FILE** P. I. No. 122090-, Rabun County **OFFICE** Preconstruction  
EDS-441(28)  
US 441/SR 15 Improvements **DATE** January 2, 2007  
**FROM** *John Kunkle* Genetha Rice-Singleton, Assistant Director of Preconstruction  
**TO** *for* SEE DISTRIBUTION

**SUBJECT** APPROVED REVISED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

GRS/cj

Attachment

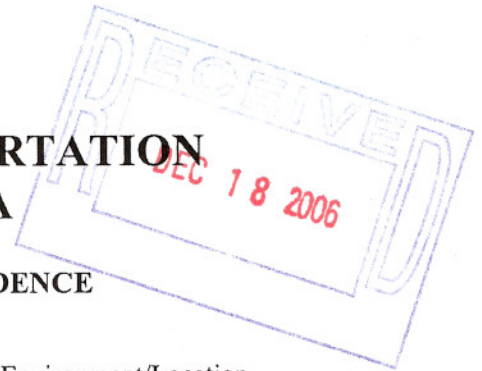
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BOARD MEMBER

100

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**



**FILE:** EDS-441(28)  
P.I. No.: 122090  
Rabun County  
*HDK/DRP*  
**FROM:** Harvey D. Keepler, State Environmental/Location Engineer  
**TO:** Genetha Rice-Singleton, Assistant Director of Preconstruction  
**SUBJECT:** **Revised Project Concept Report** – US 441/SR 15 Improvements, Rabun County

**OFFICE:** Environment/Location  
**DATE:** December 15, 2006

Attached is the original copy of the Revised Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

In order to accommodate bike lanes and minimize social impacts along US 441/SR 15, it is recommended to revise the typical sections and proposed right-of-way of EDS-441(28) in Rabun County. This portion of US 441/SR 15 is part of designated State Bicycle Route (SBR) 85. It is also recommended that any necessary design variances be requested during the design phase for a proposed context sensitive design through Dillard and a median opening at the existing US 441/SR 15 and Cross Street intersection. It is recommended that during the design phase the use of retaining walls be evaluated in major cut areas in Mountain City and Dillard.

The revised concept as presented herein and submitted for approval is consistent with that which is included in the ~~Regional Transportation Improvement Program (RTP) and/or the State Transportation Improvement Program (STIP).~~  
*c/c \**

DATE: 12/18/06 Angela T. Alexander / c/c  
State Transportation Planning Administrator

HDK/DRP/dle

Attachments

*\* RTP not applicable  
for Rabun County.*

Distribution:

**Brian Summers**, Project Review Engineer  
**Keith Golden**, State Traffic Safety & Design Engineer  
**Angela T. Alexander**, State Transportation Planning Administrator  
**Jamie Simpson**, State Transportation Financial Management Administrator  
**Babs Abubakari**, State Program Delivery & Consultant Design Engineer  
**Russell McMurtry**, Gainesville District Engineer  
**Paul Liles**, State Bridge & Structural Design Engineer

# REVISED PROJECT CONCEPT REPORT

## EDS-441(28) – RABUN COUNTY

**Need and Purpose:** US 441 is the primary north-south corridor in northeast Georgia and it is a major tourist route through the Great Smokey and Blue Ridge Mountains. The proposed widening and construction of a median would reduce congestion and enhance the traffic flow, while improving the operational characteristics and safety along US 441.

**Project location:** Project EDS-441(28) would improve US 441/SR 15 in Rabun County. The project begins along US 441/SR 15 approximately at mile post 12.3 in the northern limit of Clayton. It continues northward along US 441/SR 15 through Mountain City and the City of Dillard. The project would end at the North Carolina state line approximately at mile post 19.7 of US 441/SR 15. The total length of the project is approximately 7.4 miles.

**Description of the approved concept:** Project EDS-441(28) in Rabun County is proposed to improve US 441/SR 15 from CS 500/Clayburn Road, just inside Clayton's northern limit, northward to the North Carolina state line. US 441/SR 15 is proposed as widening to four lanes with a 20-foot raised median throughout the limits of the project. US 441/SR 15 would be widened on the west side from the beginning of the project to approximately CR 39/Mountain City Road then transition to east widening to approximately File Street. Widening would then shift back to the west to avoid impacting Stekoa Creek east of US 441/SR 15 to approximately Cross Street. From there, this project would transition to east widening entering the southern limits of Mountain City to approximately Johnson Avenue. After Johnson Avenue, widening would become symmetrical to reduce impacts to eligible historic resources on both sides of US 441/SR 15 until approximately 0.5 miles north of CR 2/John Beck Dockins Road and transition to east widening to approximately CS 700/Betty White Cloud Street in the southern limits of Dillard. Widening would then transition to the west to avoid impacting the Sue B. Pennington eligible historic resource property before transitioning back to the east approximately just north of CR 6/Greenwood Road to avoid impacting the Lucy Speed eligible historic resource property. This project would continue widening US 441/SR 15 to the east until transitioning to the west approximately at SR 246/Highlands Road to the ending terminus at the North Carolina state line.

A rural 20-foot raised median typical section would be constructed from the beginning terminus of the project to Mountain City's southern limits and from approximately SR 246/Highlands Road to the North Carolina state line on proposed right-of-way varying between 135 feet and 380 feet. An urban 20-foot raised median typical section would be constructed between Mountain City's southern limits and SR 246/Highlands Road for minimization of social impacts as well as eligible historic resources on both sides of US 441/SR 15. The proposed urban right-of-way varies between 100 feet and 420 feet. The design speed is 45 mph throughout the project. The posted speed limit between Clayton and Mountain City is 55 mph with a vertical and horizontal alignment that is substandard for a 55 mph speed design. It is recommended that a design variance be requested during the design phase that would allow the 45 mph speed design throughout the project. The total length of the project is approximately 7.4 miles.

**PDP Classification:** Major/Construction widening

**Federal Oversight:** Full Oversight ( ), Exempt( X ), State Funded( ), or Other ( )

**Functional Classification:** Rural and Urban Arterial

**U. S. Route Number(s):** 441

**State Route Number(s):** 15

**Traffic (AADT) as shown in the approved concept:**

Current Year: 2010    AADT: 13,500 – 19,000    Design Year: 2030    AADT: 21,700 – 30,400

**Proposed features to be revised:**

- **Typical Section:** To accommodate bike lanes throughout the project and avoid impacts to Dillard's shopping district, it is recommended that the typical section be revised.
- **Right-of-Way:** It is recommended that the right-of-way limits for this project also be revised to accommodate the revised typical sections.

**Describe the revised feature(s) to be approved:**

- **Typical Section:** The previously approved 20-foot raised median typical sections are recommended to be revised to accommodate bike lanes along US 441/SR 15 Georgia Designated Bike Route. The rural typical sections from the beginning terminus to Mountain City southern limit and from approximately SR 246/Highlands Road to the ending terminus will accommodate bicycle traffic within the 10-foot shoulders. The urban typical sections from Mountain City's southern city limit to approximately CR 220/Betty Creek Road and from approximately CR 6/Greenwood Road to SR 246/Highlands Road will have an additional four feet of pavement in each direction prior to the shoulder point to accommodate bike lanes (eight feet total additional pavement width). The existing 5-lane typical section at the beginning terminus would be extended slightly for business access before beginning the 20-foot raised median. The 20-foot raised median would taper into the existing 5-lane typical section just before the ending terminus at the North Carolina state line for continuity. The speed design remains as previously approved.

The typical section approximately between CR 220/Betty Creek Road and CR 6/Greenwood Road is recommended to be revised to reduce impacts to businesses along US 441/SR 15. The typical section through this section proposes to reduce the 20-foot raised median to an 8-foot raised median with 12-foot outside lanes, 11-foot inside lanes, and include 10-foot sidewalks in the urban shoulders for multi-use by pedestrians and cyclist. It is recommended that a design variance be requested during the design phase for this proposed context sensitive design in Dillard. Approximately from CR 6/Greenwood Road to SR 246/Highlands Road, widening would also shift to the west to avoid impacting the parking areas of businesses along the east side of US 441/SR 15. The Lucy Speed eligible historic resource would be impacted without an adverse affect concurred upon by the State Historic Preservation Officer (SHPO). Improvements to US 441/SR 15 would then transition and continue from approximately SR 246/Highlands Road as previously approved.

- **Right-of-Way:** The proposed right-of-way would vary between 150 feet and 450 feet for the rural typical section and vary between 130 feet and 428 feet for the urban typical section. The proposed typical section through Dillard has a proposed right-of-way varying between 86 feet and 150 feet. Side road improvements have proposed right-of-way varying between 100 feet and 150 feet.

**Other Features Revised:** CR 1/Old Wolf Fork Road and CR 5/York House Road would be relocated northward on new location to provide a safer intersection with US 441/SR 15. CR 7/Kelly's Creek Road would be relocated slightly south to its original location and improved for a safer intersection with US 441/SR 15. Franklin Street is proposed to extend to CR 6/Greenwood Road to provide access to businesses along Franklin Street due to the recommended revised typical section along US 441/SR 15 in Dillard. CR 91/FT Black Circle is proposed for extension to River Valley Lane to provide a safer intersection. The bridge over Little Tennessee River would be widened and a new bridge would be constructed over Betty Creek.



**Updated traffic data (AADT):**

Current Year: N/A AADT: N/A

Design Year: N/A AADT: N/A

**Programmed/Schedule:**

P.E. 2002

R/W:

RRB EDS LY20  
2011/LR/2009  
2009

Construction: LR

**Revised cost estimates:**

- |                                     |               |
|-------------------------------------|---------------|
| 1. Construction cost including E&C: | \$ 41,674,000 |
| 2. Right-of-way:                    | \$ 49,169,422 |
| 3. Utilities:                       | \$ 859,000    |

JDL  
12/20/06

Is the project located in a Non-attainment area? Yes ☐ No ☒

**Recommendations:**

- It is recommended that a design variance be requested during the design phase to provide a median opening at the existing Cross Street intersection with US 441/SR 15 to reduce residential impacts. The proposed concept relocates existing Cross Street slightly south to provide the 660 feet to the next proposed median opening at Playhouse Drive. The existing distance between Cross Street and Playhouse Drive is approximately 560 feet.
- It is also recommended during the design phase the use of retaining walls be evaluated in major cut areas. These wall studies are recommended between George Road and Cross Street along US 441/SR 15 in Mountain City and northwest of SR 246/Highlands Road outside of Dillard.
- It is recommended that the proposed revisions to this concept be approved for implementation.

**Attachments:**

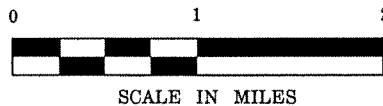
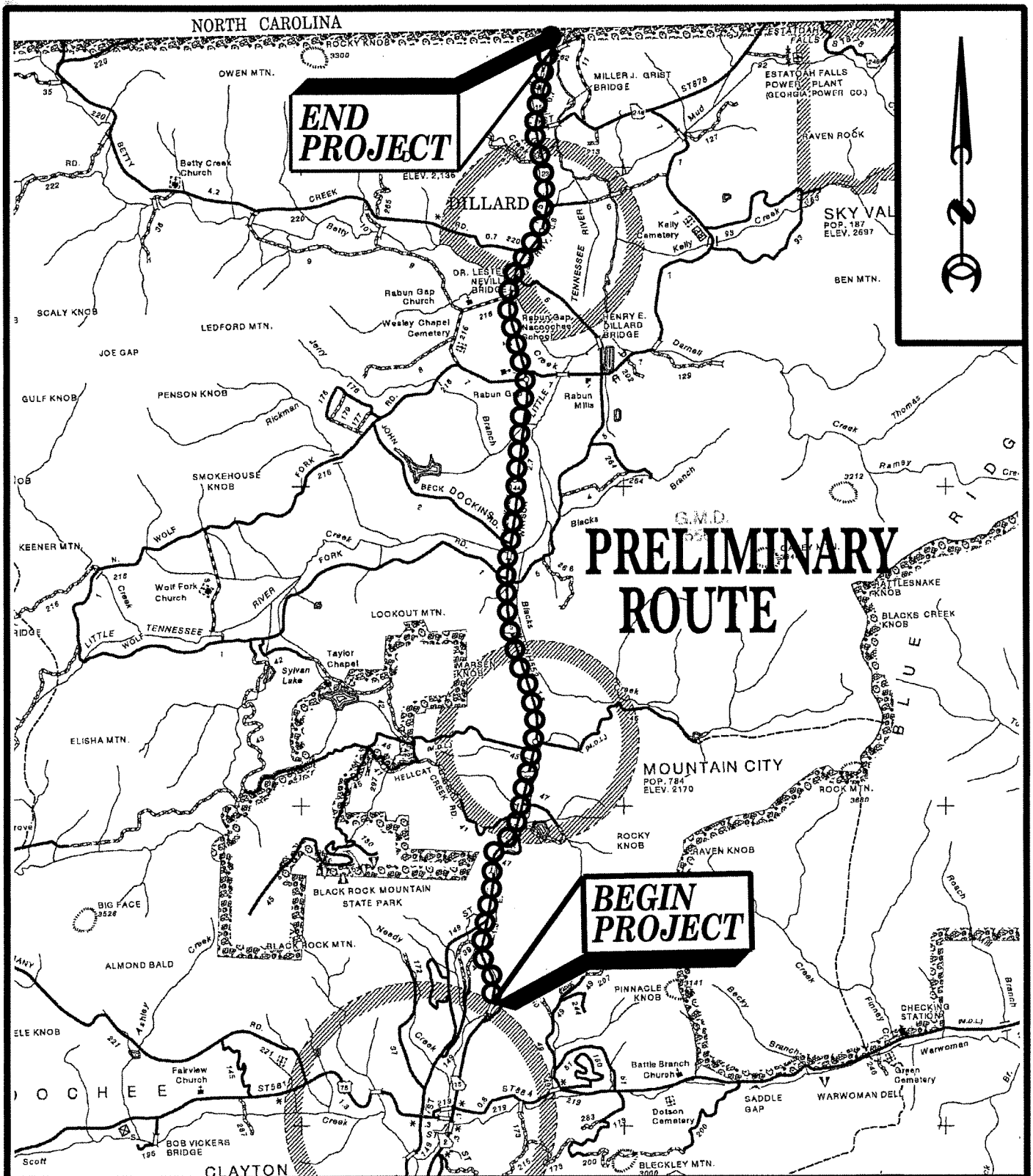
1. Sketch Map,
2. Cost Estimate,
3. Typical Sections

Concur:

Director of Preconstruction

Approve:

Chief Engineer



EDS-441(28)  
 RABUN COUNTY  
 US 41 IMPROVEMENTS:  
 FROM CLAYTON TO  
 NORTH CAROLINA STATE LINE  
 P.I.# 122090

SOURCE: GENERAL HIGHWAY MAP, BIBB CO., GEORGIA  
 PREPARED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION, 1986

# CONCEPT COST ESTIMATE

Office of Environment/Location

November 30, 2006 10:15 AM

County(s)

PI Number  Project Number

Project Name  Project Length  Miles

## Project Description

North of Clayton city limits to Georgia/North Carolina state line.

## Existing Roadway

Varies between 2/3-lane & 5-lane rural/urban typical sections

## Comments

Preliminary cost estimate for Revised Concept Report approval. Preliminary wall studies (approx. 3 walls) in major cut areas in Mountain City & Dillard: Add approx. \$4,609,000 to Subtotal Construction Cost.

## TRAFFIC:

Current Design Year  Daily Volume (AADT)

Future Design Year  Daily Volume (AADT)

☒ Concept Estimate

☐ Feasibility Estimate

## Typical Section(s) Used in Estimate

## Typical Section Length

|   |   |
|---|---|
| Rural Widening: 2 To 4-Lanes with 20 ft Raised Median Widen On One Side | <input type="text" value="2.40"/> Miles |
| Urban Widening: 2 To 4-Lanes with 20 ft Raised Median Widen On One Side | <input type="text" value="5.00"/> Miles |
| Rural New Location: 2-Lanes with 24 ft Pavement                         | <input type="text" value="2.20"/> Miles |
| <input type="text"/>  | <input type="text"/> Miles              |
| <input type="text"/>  | <input type="text"/> Miles              |
| <input type="text"/>  | <input type="text"/> Miles              |

Prepared By

**MAJOR STRUCTURES***Note! All distances are in feet***Bridges: Stream Crossings & Grade Separations**

| NO | LOCATION               | Q<br>T<br>Y | CROSSING<br>TYPE | WIDTH  | LENGTH | UNIT<br>COST | TOTAL     |
|----|------------------------|-------------|------------------|--------|--------|--------------|-----------|
| 1  | Little Tennessee River | 1           | Stream-Widen     | 15.00  | 99.0   | 120.00       | 178,000   |
| 2  | Betty Creek            | 1           | Stream-New       | 102.50 | 135.0  | 85.00        | 1,176,000 |
| 3  |                        |             |                  |        |        |              |           |
| 4  |                        |             |                  |        |        |              |           |
| 5  |                        |             |                  |        |        |              |           |
| 6  |                        |             |                  |        |        |              |           |
| 7  |                        |             |                  |        |        |              |           |
| 8  |                        |             |                  |        |        |              |           |
| 9  |                        |             |                  |        |        |              |           |
| 10 |                        |             |                  |        |        |              |           |
| 11 |                        |             |                  |        |        |              |           |
| 12 |                        |             |                  |        |        |              |           |

**Bridge Culverts**

| NO | LOCATION                          | TYPE / W x H / FILL | LENGTH | UNIT<br>COST | TOTAL  |
|----|-----------------------------------|---------------------|--------|--------------|--------|
| 1  | Mountain City                     | Single / 6 x 4 / 30 | 100.0  | 422.11       | 42,000 |
| 2  | North of Dillard - State Line Rd. | Single / 5 x 4 / 10 | 40.0   | 371.18       | 15,000 |
| 3  |                                   |                     |        |              |        |
| 4  |                                   |                     |        |              |        |
| 5  |                                   |                     |        |              |        |
| 6  |                                   |                     |        |              |        |
| 7  |                                   |                     |        |              |        |
| 8  |                                   |                     |        |              |        |

**Walls**

| NO | LOCATION               | TYPE | HEIGHT | LENGTH  | UNIT<br>COST | TOTAL     |
|----|------------------------|------|--------|---------|--------------|-----------|
| 1  | Mountain City-File St. | MSE  | 7.0    | 1,250.0 | 65.00        | 569,000   |
| 2  | Dillard-Piggly Wiggly  | MSE  | 25.0   | 900.0   | 65.00        | 1,463,000 |
| 3  |                        |      |        |         |              |           |
| 4  |                        |      |        |         |              |           |
| 5  |                        |      |        |         |              |           |
| 6  |                        |      |        |         |              |           |

|                                  |                     |
|----------------------------------|---------------------|
| <b>MAJOR STRUCTURES SUBTOTAL</b> | <b>\$ 3,443,000</b> |
|----------------------------------|---------------------|



**Typical Section**

Rural Widening: 2 To 4-Lanes with 20 ft Raised Median Widen On One Side

Typical Section Length  MilesRight-of-Way Width  Feet**GRADING AND DRAINAGE****1. EARTHWORK**

- a. Unclassified Excavation Soil
- b. Unclassified Excavation Rock
- c. Borrow Excavation

**2. MINOR DRAINAGE**

| QUANTITY                             |    | UNIT COST | TOTAL              |
|--------------------------------------|----|-----------|--------------------|
| 576,000                              | CY | 8.25      | 4,752,000          |
| 64,000                               | CY | 35.00     | 2,240,000          |
|                                      | CY |           |                    |
| 2.40                                 | MI | 119,182   | 286,000            |
| <b>GRADING AND DRAINAGE SUBTOTAL</b> |    |           | <b>\$7,278,000</b> |

**BASE AND PAVING****1. GRADED AGGREGATE BASE****2. ASPHALT PAVING**

- a. Asph Conc 9.5 mm Superpave
- b. Asph Conc 19 mm Superpave
- c. Asph Conc 25 mm Superpave
- d. Bituminous Tack Coat

**3. CONCRETE PAVING**

- a. Curb and Gutter
- b. Miscellaneous

**4. OTHER PAVING**

| THICKNESS and<br>SPREAD RATE    | QUANTITY |    | UNIT<br>COST | TOTAL              |
|---------------------------------|----------|----|--------------|--------------------|
| 10"                             | 26,354   | TN | 28.38        | 748,000            |
| 1 1/2" (165 LB/SY)              | 8,015    | TN | 100.25       | 804,000            |
| 3" (330 LB/SY)                  | 8,663    | TN | 106.15       | 920,000            |
| 4" (440 LB/SY)                  | 7,648    | TN | 94.35        | 722,000            |
|                                 | 6,471    | GL | 2.42         | 16,000             |
|                                 | 23,650   | LF | 32.04        | 758,000            |
|                                 | 2.40     | MI | 17,005       | 41,000             |
|                                 |          |    |              | 401,000            |
| <b>BASE AND PAVING SUBTOTAL</b> |          |    |              | <b>\$4,410,000</b> |

**LUMP ITEMS**

- 1. TRAFFIC CONTROL
- 2. CLEARING AND GRUBBING
- 3. EROSION CONTROL
- 4. SIGNING & MARKING
- 5. MISCELLANEOUS

| QUANTITY                  |    | UNIT COST | TOTAL            |
|---------------------------|----|-----------|------------------|
| 2.40                      | MI | 65,043    | 156,000          |
| 58.18                     | AC | 6,000     | 349,000          |
| 2.40                      | MI | 117,160   | 281,000          |
| 2.40                      | MI | 25,577    | 61,000           |
| 2.40                      | MI | 31,355    | 75,000           |
| <b>LUMP ITEM SUBTOTAL</b> |    |           | <b>\$922,000</b> |

**MISCELLANEOUS PROJECT ITEMS**

- 1. GUARDRAIL
- 2. GUARDRAIL ANCHORS
- 3. DETOURS
- 4. SPECIAL FEATURES

|  |                  |
|--|------------------|
| Extra concrete sidewalk width through Dillard [5ft x 1972ft (both sides) x 4"] | 46,393           |
| <b>MISCELLANEOUS SUBTOTAL</b>  | <b>\$385,000</b> |

**Typical Section**

Urban Widening: 2 To 4-Lanes with 20 ft Raised Median Widen On One Side

Typical Section Length  MilesRight-of-Way Width  Feet**GRADING AND DRAINAGE****1. EARTHWORK**

- a. Unclassified Excavation Soil
- b. Unclassified Excavation Rock
- c. Borrow Excavation

**2. MINOR DRAINAGE**

| QUANTITY                      |    | UNIT COST | TOTAL              |
|-------------------------------|----|-----------|--------------------|
| 337,000                       | CY | 8.25      | 2,780,000          |
| 25,000                        | CY | 35.00     | 875,000            |
|                               | CY |           |                    |
| 5.00                          | MI | 543,291   | 1,304,000          |
| GRADING AND DRAINAGE SUBTOTAL |    |           | <b>\$4,959,000</b> |

**BASE AND PAVING****1. GRADED AGGREGATE BASE****2. ASPHALT PAVING**

- a. Asph Conc 9.5 mm Superpave
- b. Asph Conc 19 mm Superpave
- c. Asph Conc 25 mm Superpave
- d. Bituminous Tack Coat

**3. CONCRETE PAVING**

- a. Curb and Gutter
- b. Miscellaneous

**4. OTHER PAVING**

| THICKNESS and<br>SPREAD RATE | QUANTITY |    | UNIT<br>COST | TOTAL              |
|------------------------------|----------|----|--------------|--------------------|
| 10"                          | 43,464   | TN | 28.38        | 1,234,000          |
| 1 1/2" (165 LB/SY)           | 13,552   | TN | 100.25       | 1,359,000          |
| 3" (330 LB/SY)               | 11,755   | TN | 106.15       | 1,248,000          |
| 4" (440 LB/SY)               | 15,933   | TN | 94.35        | 1,503,000          |
|                              | 10,970   | GL | 2.42         | 27,000             |
|                              | 80,736   | LF | 32.04        | 2,587,000          |
|                              | 5.00     | MI | 56,997       | 285,000            |
|                              |          |    |              | 824,000            |
| BASE AND PAVING SUBTOTAL     |          |    |              | <b>\$9,067,000</b> |

**LUMP ITEMS**

- 1. TRAFFIC CONTROL
- 2. CLEARING AND GRUBBING
- 3. EROSION CONTROL
- 4. SIGNING & MARKING
- 5. MISCELLANEOUS

| QUANTITY           |    | UNIT COST | TOTAL              |
|--------------------|----|-----------|--------------------|
| 5.00               | MI | 115,304   | 577,000            |
| 78.79              | AC | 6,000     | 473,000            |
| 5.00               | MI | 100,119   | 501,000            |
| 5.00               | MI | 47,818    | 239,000            |
| 5.00               | MI | 76,197    | 381,000            |
| LUMP ITEM SUBTOTAL |    |           | <b>\$2,171,000</b> |

**Typical Section**

Rural New Location: 2-Lanes with 24 ft Pavement

Typical Section Length  MilesRight-of-Way Width  Feet**GRADING AND DRAINAGE****1. EARTHWORK**

- a. Unclassified Excavation Soil
- b. Unclassified Excavation Rock
- c. Borrow Excavation

**2. MINOR DRAINAGE**

| QUANTITY                             |    | UNIT COST | TOTAL              |
|--------------------------------------|----|-----------|--------------------|
| 171,000                              | CY | 8.25      | 1,411,000          |
| 19,000                               | CY | 35.00     | 665,000            |
|                                      | CY |           |                    |
| 2.20                                 | MI | 36,170    | 87,000             |
| <b>GRADING AND DRAINAGE SUBTOTAL</b> |    |           | <b>\$2,163,000</b> |

**BASE AND PAVING****1. GRADED AGGREGATE BASE****2. ASPHALT PAVING**

- a. Asph Conc 9.5 mm Superpave
- b. Asph Conc 19 mm Superpave
- c. Asph Conc 25 mm Superpave
- d. Bituminous Tack Coat

**3. CONCRETE PAVING**

- a. Curb and Gutter
- b. Miscellaneous

**4. OTHER PAVING**

| THICKNESS and<br>SPREAD RATE    | QUANTITY |    | UNIT<br>COST | TOTAL              |
|---------------------------------|----------|----|--------------|--------------------|
| 10"                             | 20,673   | TN | 28.38        | 587,000            |
| 1 1/2" (165 LB/SY)              | 2,981    | TN | 100.25       | 299,000            |
| 3" (330 LB/SY)                  | 6,024    | TN | 106.15       | 639,000            |
| 4" (440 LB/SY)                  | 7,011    | TN | 94.35        | 661,000            |
|                                 | 4,260    | GL | 2.42         | 10,000             |
|                                 |          | LF |              |                    |
|                                 | 2.20     | MI | 17,255       | 38,000             |
|                                 |          |    |              | 223,000            |
| <b>BASE AND PAVING SUBTOTAL</b> |          |    |              | <b>\$2,457,000</b> |

**LUMP ITEMS**

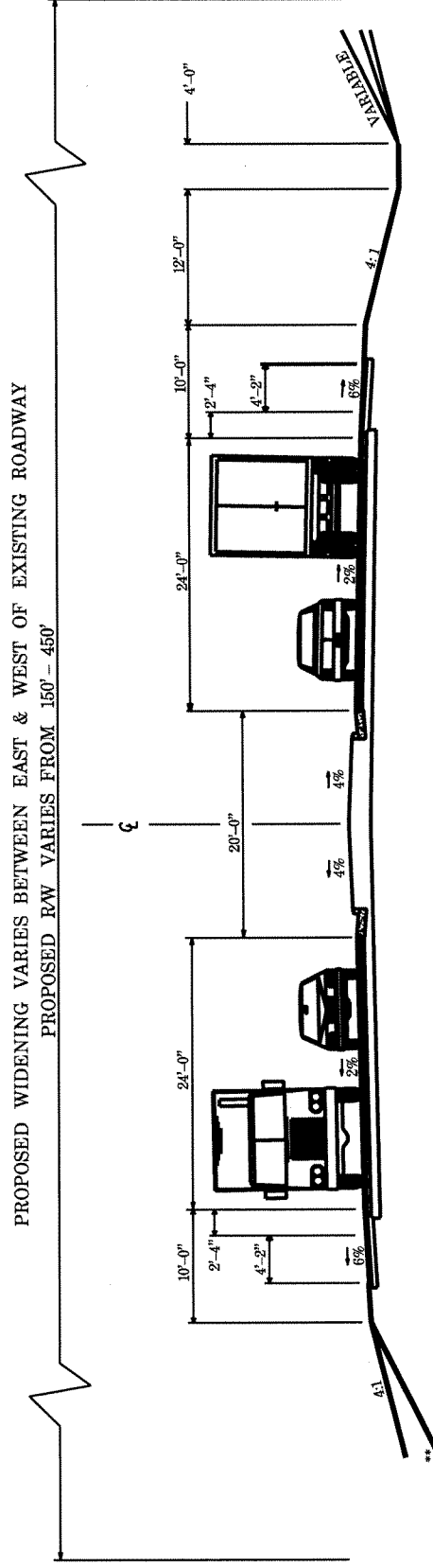
- 1. TRAFFIC CONTROL
- 2. CLEARING AND GRUBBING
- 3. EROSION CONTROL
- 4. SIGNING & MARKING
- 5. MISCELLANEOUS

| QUANTITY                  |    | UNIT COST | TOTAL            |
|---------------------------|----|-----------|------------------|
| 2.20                      | MI | 10,696    | 24,000           |
| 26.67                     | AC | 6,000     | 160,000          |
| 2.20                      | MI | 174,425   | 384,000          |
| 2.20                      | MI | 8,116     | 18,000           |
| 2.20                      | MI | 20,085    | 44,000           |
| <b>LUMP ITEM SUBTOTAL</b> |    |           | <b>\$630,000</b> |

## ESTIMATE SUMMARY

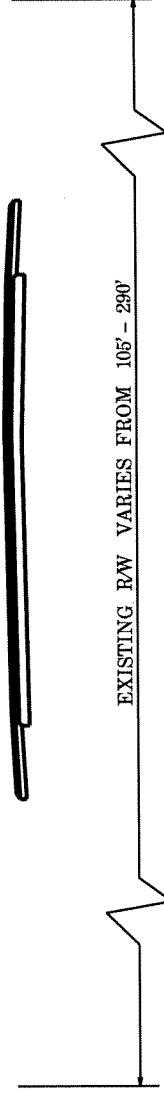
| TYPICAL SECTION  |    | COST (per mile)   |
|--|----|-------------------|
| 1. Rural Widening: 2 To 4-Lanes with 20 ft Raised Median Widen On One Side | \$ | 5,254,000         |
| 2. Urban Widening: 2 To 4-Lanes with 20 ft Raised Median Widen On One Side | \$ | 3,239,000         |
| 3. Rural New Location: 2-Lanes with 24 ft Pavement                         | \$ | 2,386,000         |
| <b>PROJECT COST</b>  |    |                   |
| <b>A. MAJOR STRUCTURES</b>   | \$ | <b>3,443,000</b>  |
| <b>B. GRADING AND DRAINAGE</b>   | \$ | <b>14,400,000</b> |
| <b>C. BASE AND PAVING</b>  | \$ | <b>15,934,000</b> |
| <b>D. LUMP ITEMS</b>   | \$ | <b>3,723,000</b>  |
| <b>E. MISCELLANEOUS</b>  | \$ | <b>385,000</b>    |
| <b>SUBTOTAL CONSTRUCTION COST</b>  | \$ | <b>37,885,000</b> |
| <b>ENGINEERING &amp; CONTINGENCIES (10%)</b>                               | \$ | <b>3,789,000</b>  |
| <b>INFLATION</b> ____ yr(s) @    ____ % per yr                             |    |                   |
| <b>GRAND TOTAL CONSTRUCTION COST</b>                                       | \$ | <b>41,674,000</b> |

# TYPICAL SECTION 20-FOOT RAISED MEDIAN W/BIKE LANES RURAL SECTION 45 MPH SPEED DESIGN



\*\* Guardrail Required when steeper than 4:1  
 15'-6" shoulder with guardrail

EXISTING 3-LANE RURAL TYPICAL SECTION



US 441/US 23/SR 15 IMPROVEMENT  
 EDS-441(28) RABUN CO.

FROM BEGINNING TERMINUS  
 TO SOUTHERN MOUNTAIN CITY LIMITS.

FROM SR 246/HIGHLANDS RD.  
 TO GEORGIA & NORTH CAROLINA STATE LINE.

NOT TO SCALE

PROPOSED WIDENING VARIES BETWEEN EAST, SYMMETRICAL, & WEST OF EXISTING ROADWAY

PROPOSED RW VARIES FROM 130' - 428'

24' Max. 24' Max.

16'-0" 4'-0" BIKE LANE 24'-0" 20'-0" 4'-0" BIKE LANE 24'-0"

2% 4% 4% 2%

24' Max. 24' Max.

C

EXISTING RAW VARIES FROM 70' - 175'

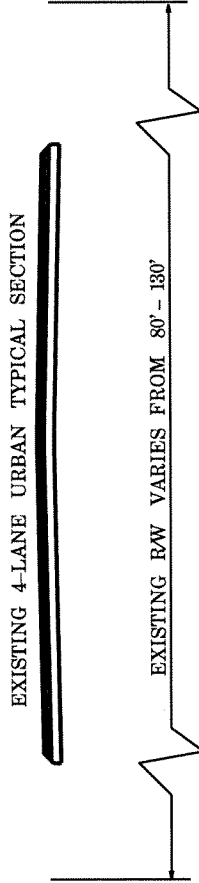
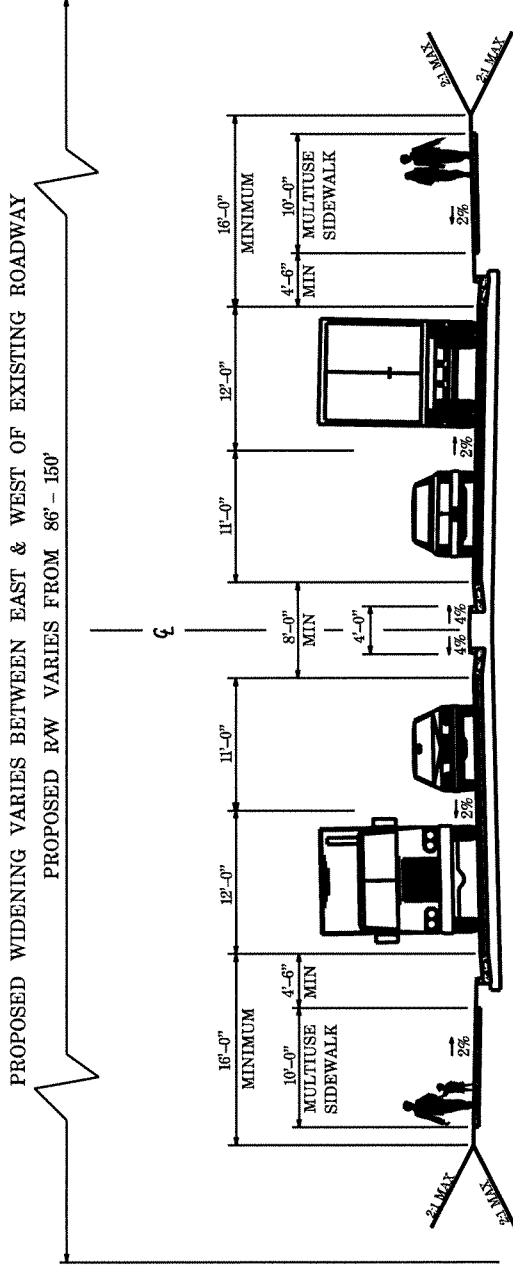
FROM APPROX. CR 6 GREENWOOD RD. TO SR 246 HIGHLANDS RD.

NOT TO SCALE



TYPICAL SECTION  
 8-FT RAISED MEDIAN URBAN SECTION  
 (12-FT OUTSIDE LANES & 11-FT INSIDE LANES)  
 45 MPH SPEED DESIGN

**\*\*MULTIUSE SIDEWALKS FOR PEDESTRIANS & CYCLIST\*\***

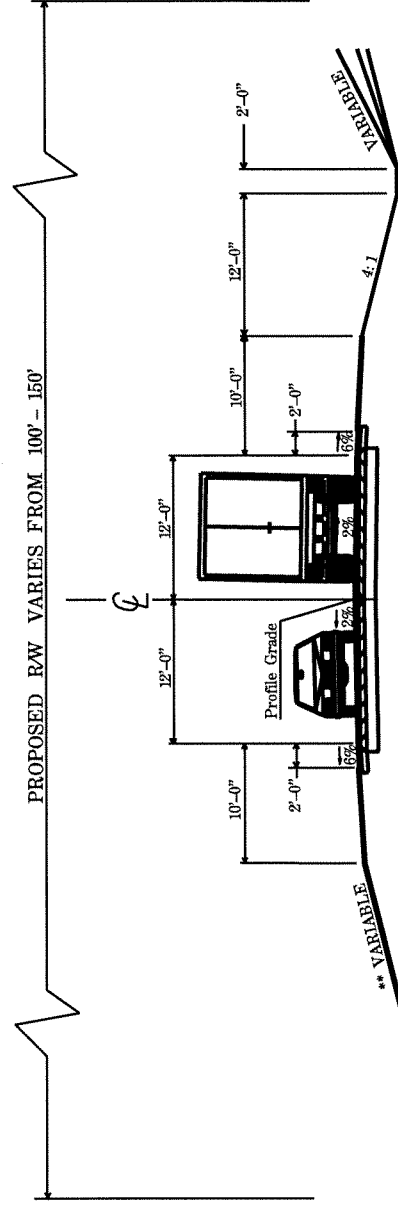


US 441/US 23/SR 15 IMPROVEMENT  
 EDS-441(28) RABUN CO.

APPROX. BETWEEN CR 220/BETTY CREEK RD. & CR 6/GREENWOOD RD.

NOT TO SCALE

# TYPICAL SECTION 2-LANE RURAL SECTION 25-35 MPH SPEED DESIGN (RELOCATION & TIE-INS)



\*\* Guardrail Required when steeper than 4:1  
15'-6" shoulder with guardrail

US 441/US 23/SR 15 IMPROVEMENT  
EDS-441(28) RABUN CO.

## RELOCATION & TIE-INS FOR:

CS 500/CLAYBURN RD., CR 39/MOUNTAIN CITY RD., GEORGE RD., CROSS ST.,  
FILE ST., GREEN ACRES DR. EXTENSION TO GREEN ST.,  
CR 10/OLD WOLF FORK RD., CR 5/YORK HOUSE RD., CR 7/KELLY'S CREEK RD.  
FRANKLIN ST. EXTENSION TO CR 6/GREENWOOD RD., CAROLINA ST.,  
CR 91/F.T. BLACK CIR. EXTENSION TO RIVER VALLEY LN.  
CR 11/LAMB RD.

NOT TO SCALE